Goals Identified August 2006, presented to Workgroup September 2006

The Mercury Workgroup Sub-committee has identified three areas or phases through which to address the issue of mercury levels in Utah. The three areas (or phases) are:

1. **To Identify Human Risks:** investigate pathways to human exposure with a primary focus on fish and waterfowl consumption.

   ACTION ITEM:
   Develop systematic monitoring program for measuring Hg levels in fish and waterfowl. Consumption advisories will be issued as appropriate based on human health assessments completed by the Dept. of Health.

   WHO: A team comprised of representatives from the following agencies is suggested: DWR, DWQ, FWS, TU, DU, and USGS

   WHEN: Suggested target dates:
   Begin by October 1, 2006 (meet initially with subcommittee to clarify goals)
   Complete by December 31, 2006

   The Sub-committee recommends that the above-mentioned team develop a protocol for measuring mercury in fish and waterfowl with the following considerations:

   - Statewide sampling determined by
     - Human use/popularity
     - Regional representation
   - Collection protocol
   - Handling protocol
   - Analytical protocol
   - Quality Assurance protocol

2. **Source Delineation**

   Concurrently and/or following the "Phase I" investigation, the subcommittee recommends further investigation of source delineation by following a tiered approach to identify anthropogenic and natural mercury sources.

   Potential anthropogenic sources may include:
   - Legacy mining
   - Air sources
     - power plants
     - Other

- Industry

Potential natural sources may include:

- Geologic
  - Volcano
- Sediment
- Water column

Outline of Tiered Approach

After a hotspot is initially identified by high mercury concentrations in fish tissue, a tiered approach will be used to attempt to delineate the source of mercury.

Tier 1: Resample the watershed more extensively to validate the initial results and start to assess extent of mercury contamination. Select multiple biota to help determine what the source and pathway might be. This step is appropriate before more costly steps are taken in tier 3.

Tier 2: Complete a watershed analysis, identifying potential anthropogenic and natural sources of mercury in the area. This is a fairly cost effective way to try delineating the source of mercury.

Tier 3: Conduct intensive sampling that follows transport mechanisms. This could include sediment core sampling, clean water column sampling, and studies of jet streams and atmospheric deposition. This tier utilizes more financial and human resources than the first two, but might paint a more accurate picture of what's happened/happening in the watershed in terms of mercury deposition.

3. Source Minimization

Minimization action items will follow once source delineation is established.